CLAIMS

1. A method for processing input media in a computing device, the method comprising:

caching a reconstructed frame according to a set of criteria;

receiving a request to scrub to a predictive frame of input media; and

responsive to receiving the request, decoding the predictive frame starting with the reconstructed frame.

2. A method as recited in claim 1, wherein the caching is by a component in a media pipeline.

3. A method as recited in claim 1, wherein the caching is by a media engine, a media processor, a media decoder, or an effect transform component of a media pipeline.

4. A method as recited in claim 1, wherein the caching is responsive to playback of the input media.

5. A method as recited in claim 1, wherein the caching is responsive to detection of a reverse playback operation by an application interfacing with a media platform.

6.   A method as recited in claim 1, wherein the caching is performed independent of input media playback.

7.   A method as recited in claim 1, wherein the reconstructed frame is a latest reconstructed frame in a timeline specified by the input media or the application.

8.   A method as recited in claim 1, wherein the request is sent by an application, the application not being part of the media pipeline.

9.   A method as recited in claim 1, wherein the criteria is based on a periodic time interval, available system memory, a requesting application playback rate, a detected display device resolution, a determination that the application repeatedly requests similar frames of input media, determining that the application has reverse playback capabilities, and/or a request from the application to play a portion of the input media in reverse.

10.   A method as recited in claim 1, wherein caching, the reconstructed frame is of a particular media type of multiple possible media types that are cached by a component of a media engine in a media processing pipeline.

11.   A method as recited in claim 1, wherein responsive to receiving the request and before decoding, the method further comprises:

determining that there is a cached reconstructed frame representing a complete decoded version of an inter-frame of the input media, the cached

reconstructive frame being associated with a time less than or equal to a time t_request of the predictive frame; and

wherein the cached reconstructed frame is the reconstructed frame.

12.   A method as recited in claim 1, wherein the method further comprises specifying, by a media engine portion of a media platform, a location in a media pipeline for caching the reconstructed frame.

13.   A method as recited in claim 12, wherein the location is subsequent to decoding of the input media and prior to any effect transformation on decoded frames.

14.   A method as recited in claim 12, wherein the location subsequent to an effect transformation on decoded frames.

15.   A method as recited in claim 1, wherein the method further comprises interfacing, by an application separate from a media platform, with a media engine component of the media platform to specify a location in a media pipeline for caching reconstructed frame.

16.   A method as recited in claim 15, wherein the location is subsequent to an effect transform component that operates on decoded frames of the input media.

17. A computer-readable media comprising computer-executable instructions for processing input media in a computing device, the computer-executable instructions comprising instructions for:

caching a reconstructed frame according to a set of criteria;

receiving a request to scrub to a predictive frame of input media; and

responsive to receiving the request, decoding the predictive frame starting with the reconstructed frame.

18. A computer-readable media as recited in claim 17, wherein the caching is by a media engine, a media processor, a media decoder, or an effect transform component of a media pipeline.

19. A computer-readable media as recited in claim 17, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the criteria is based on periodic time intervals, available system memory, a requested playback rate, a detected display device resolution, a determination that similar frames of input media are repeatedly requested, determining that an application for playback of the input media has reverse playback capabilities, and/or a request from the application to play a given section of content in reverse.

20. A computer-readable media as recited in claim 17, wherein the caching is by a component in a media pipeline.

21. A computer-readable media as recited in claim 17, wherein responsive to receiving the request and before decoding, the computer-executable instructions further comprise instructions for:

determining that there is a cached reconstructed frame representing a complete decoded version of an inter-frame of the input media, the cached reconstructive frame being associated with a time less than or equal to a time t_request of the predictive frame; and

wherein the cached reconstructed frame is the reconstructed frame.

22. A computer-readable media as recited in claim 21, wherein the request is sent by an application that is independent of a media processing pipeline and wherein the reconstructed frame is a latest reconstructed frame in a timeline specified by the input media or the application.

23. A computer-readable media as recited in claim 17, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the application enables reconstructed frame caching.

24. A computer-readable media as recited in claim 17, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the computer-program instructions further comprise receiving, from the application, a location in the media processing pipeline to implement the reconstructed frame caching.

25.   A computer-readable media as recited in claim 24, wherein the location is subsequent to an effect transform component that operates on decoded frames of the input media.

26.   A computer-readable media as recited in claim 24, wherein the location is immediately subsequent to a media decoding module.

27.   A computing device for processing input media in a computing device, the computing device comprising:

a processor; and

a memory coupled to the processor, the memory comprising computer-program instructions executable by the processor for:

caching a reconstructed frame according to a set of criteria;

receiving a request to scrub to a predictive frame of input media; and

responsive to receiving the request, decoding the predictive frame starting with the reconstructed frame.

28.   A computing device as recited in claim 27, wherein the caching is by a media engine, a media processor, a media decoder, or an effect transform component of a media pipeline.

29.   A computing device as recited in claim 27, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the criteria is based on periodic time intervals, decoded frame size and available system memory, a requesting application playback rate, a detected display device resolution, a determination that the application repeatedly requests similar frames of input media, determining that the application has reverse playback capabilities, and/or a request from the application to play a given section of content in reverse.

30.   A computing device as recited in claim 27, wherein the caching is by a component in a media pipeline.

31.   A computing device as recited in claim 27, wherein responsive to receiving the request and before decoding, the computer-program instructions further comprise instructions for:

determining that there is a cached reconstructed frame representing a complete decoded version of an inter-frame of the input media, the cached reconstructive frame being associated with a time less than or equal to a time t_request of the predictive frame; and

wherein the cached reconstructed frame is the reconstructed frame.

32. A computing device as recited in claim 31, wherein the request is sent by an application that is independent of a media processing pipeline and wherein the reconstructed frame is a latest reconstructed frame in a timeline specified by the input media or the application.

33. A computing device as recited in claim 27, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the application enables reconstructed frame caching.

34. A computing device as recited in claim 27, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the computer-program instructions further comprise receiving, from the application, a location in the media processing pipeline to implement the reconstructed frame caching.

35. A computing device as recited in claim 34, wherein the location is subsequent to an effect transform component that operates on decoded frames of the input media.

36. A computing device as recited in claim 34, wherein the location is immediately subsequent to a media decoding module.

37. A computing device for processing input media in a computing device, the computing device comprising:

    means for caching a reconstructed frame according to a set of criteria;

    means for receiving a request to scrub to a predictive frame of input media; and

    responsive to receiving the request, means for decoding the predictive frame starting with the reconstructed frame.

38. A computing device as recited in claim 37, wherein the caching is by a media engine, a media decoder, or an effect transform component of a media pipeline.

39. A computing device as recited in claim 37, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the criteria is based on periodic time intervals, decoded frame size and available system memory, a requesting application playback rate, a detected display device resolution, a determination that the application repeatedly requests similar frames of input media, determining that the application has reverse playback capabilities, and/or a request from the application to play a given section of content in reverse.

40. A computing device as recited in claim 37, wherein the caching is by means in a media pipeline.

41.   A computing device as recited in claim 37, wherein responsive to receiving the request and before decoding, the computing device further comprises:

means for determining that there is a cached reconstructed frame representing a complete decoded version of an inter-frame of the input media, the cached reconstructive frame being associated with a time less than or equal to a time t_request of the predictive frame; and

wherein the cached reconstructed frame is the reconstructed frame.

42.   A computing device as recited in claim 37, wherein the request is sent by an application that is independent of a media processing pipeline and wherein the reconstructed frame is a latest reconstructed frame in a timeline specified by the input media or the application.

43.   A computing device as recited in claim 37, wherein the request is sent by an application that is independent of a media processing pipeline, and wherein the application enables reconstructed frame caching.

44.   A computing device as recited in claim 37, wherein the computing device further comprises means for setting and retrieving a reconstructed frame caching playback mode of a media platform.

45. A computing device as recited in claim 37, wherein the computing device further comprises:

means for getting the reconstructed frame from a frame cache; and

means for indicating to a media decoder to start decoding the input media from the reconstructed frame.

46. A computing device as recited in claim 37, wherein the computing device further comprises means for enabling and disabling reconstructed frame caching.

47. A computing device as recited in claim 46, wherein the means for enabling further comprise means for specifying a media type to cache, a component wherein after caching is to be implemented in a media processing pipeline, a cache size limit, and/or a cache interval.

48. A computing device as recited in claim 37, wherein the computing device further comprises means for creating a scrubbing destination.

49. A computing device as recited in claim 48, wherein the means for creating further comprise means for specifying a destination for output by a media engine when playback mode indicates that reconstructed frames are to be cached during playback.

50.   A computing device as recited in claim 37, wherein the request is sent by an application that is independent of media processing pipeline means, and wherein the computing device further comprises means for receiving, from the application, a location in the media processing pipeline to implement the reconstructed frame caching.

51.   A computing device as recited in claim 50, wherein the location is subsequent to an effect transform component that operates on decoded frames of the input media.

52.   A computing device as recited in claim 50, wherein the location is immediately subsequent to a media decoding module.